

## **REMARKS**

Claims 1-20 were presented for examination. The Office Action dated February 23, 2005 rejects claims 1-20. This paper amends claims 1, 7, 10, 17, 19, and 20. Claims 1-20 remain pending in the application.

### **Claim Objection**

The Office Action objects to claim 7 for being dependent on claim 1, whereas the dependency of claim 7 appears to be on claim 6. Examiner's understanding of the intended dependency of claim 7 is correct. Applicants are grateful to the Examiner for pointing out this inadvertence. This paper amends claim 7 to depend from claim 6 in order to overcome the objection.

### **Rejection of Claims 10, 13, 16, 18, and 20 under 35 U.S.C. 102(e)**

The Office Action rejects claims 10, 13, 16, 18, and 20 under 35 U.S.C. 102(e) as anticipated by Ballintine (U.S. Patent No. 6,594,047).

As now set forth in representative claim 10, the Applicants claim an optical network for supporting a service provided by a service provider over a dedicated circuit between service termination points. One network element sends a message to another network element using a service management channel. The message includes service-specific information related to a performance of the service over the dedicated circuit.

The cited reference, Ballintine, discloses an optical supervisory channel (OSC) that carries messages related to information obtained by performance monitoring and performance measuring. This performance information, however, pertains to the performance of one or more optical channels; it is not specific to any given service. To illustrate, Ballintine's primary example of information carried by the OSC is a "Forward Defect Indicator" or FDI. The FDI serves to inform downstream equipment of the detection of, for example, an abnormal condition, a defective optical channel, a cross point failure, or a misconnection (see col. 2, lines 55-60). In each of these situations, however, the performance information being conveyed on the OSC relates to a maintenance function for the optical transport facility (i.e., the links, the optical channels, and the switching equipment). Thus, unlike the Applicants' claimed messages, Ballintine's messages do not carry service-specific information related to the performance of a service, as now set forth in the Applicants' claimed invention.

This distinction is by no means a small one. For instance, in the Applicants' specification, a service is described as "a guarantee of transport of customer-offered traffic with specific performance commitments." Consequently, a service provider may be keenly interested in knowing how well the performance of the service is faring compared to the specific performance commitments. Because the information in Ballintine's

messages is not specific to a service, a service provider can make no service-specific assessment from the information contained therein. True, the information in Ballintine's messages may alert the service provider to, for example, a defective optical channel and even assist in locating the fault, but these messages provide no express direct indication of which service, if any, the defective optical channel is affecting. The defective optical channel may be affecting none, one, or all of the service provider's services, but without service-specific information, there is no direct way to tell. In contrast, the Applicants' invention enables network administrators to determine how services are performing at each of the network elements because the information conveyed by the service management channel is service-specific.

Therefore, because Ballintine fails to disclose or suggest a service management channel that carries messages with service-specific information related to a performance of the service, Applicants' respectfully submit that Ballintine does not anticipate or suggest the Applicants' claimed invention. Consequently, Applicants respectfully submit that the rejection to the claims is overcome.

Independent claim 20 recites language similar to the language recited in claim 1. Therefore, this independent claim is also patentably distinguishable over Ballintine for at least those reasons provided in

connection with claim 1. In addition, dependent claims 3, 16, and 18 depend directly or indirectly from patentable independent claim 10, and incorporate all of its respective limitations, and therefore are also patentably distinguishable over the cited references for at least this reason. Therefore, the Applicants respectfully submit that the rejection against these claims is also overcome.

**Rejection of Claims 1, 2, 3, 5, and 8 under 35 U.S.C. 103(a)**

The Office Action rejects claims 1, 2, 3, 5, and 8 under 35 U.S.C. 103(a) as being unpatentable over Applicants' Admitted Prior Art (AAPA) in view of Ballintine.

As set forth in claim 1, the Applicants' invention relates to a method for managing a service across an optical network between service termination points. Each service termination point generates a service performance report message. Each service report message has service-specific information related to the performance of the service. One of the service termination points transmits its service performance report message to the other termination point over a service management channel. Assessment of the performance of the service can then be assessed based on the service performance report messages from both service termination points.

In rejecting claim 1, the Office Action refers to a portion of the Applicants' Background (referred to in the Office Action as AAPA) that describes SONET and certain problems known in industry: specifically, the difficulties of transmitting OAM information across handoff points and of isolating faults. The Office Action then states that the AAPA does not teach sending service performance report messages across different networks for assessing the performance of the service based on the messages of both termination points. Applicants respectfully submit that neither does Ballintine.

Admittedly, Ballintine does teach transmitting OAM information across sub-network boundaries using a "digital wrapper." However, as argued above in connection with claim 10, such OAM information relates to the performance *of the optical transport facility*, and not *to the performance of any specific service*. Therefore, any combination of Ballintine with the AAPA, does not disclose or teach the Applicants' service performance report messages – which contain service-specific information – for assessing the performance of the service, as now set forth in the Applicants' claimed invention. Consequently, Applicants respectfully submit that the rejection to this claim is overcome.

Dependent claims 2, 3, 5, and 8 depend directly or indirectly from patentable independent claim 1, and incorporate all of its respective limitations, and therefore are also patentably distinguishable over the cited references for at least this reason. Therefore, the Applicants respectfully submit that the rejection against these claims is also overcome.

**Rejection of Claims 11, 14-15, 17, and 19 under 35 U.S.C. 103(a)**

The Office Action rejects claims 11, 14-15, 17, and 19 under 35 U.S.C. 103(a) as being unpatentable over Ballintine.

Applicants' independent claim 19 recites language similar to the language recited in claim 10. Therefore, this independent claim is also patentably distinguishable over Ballintine for at least those reasons provided in connection with claim 10. In addition, dependent claims 11, 14-15, and 17 depend directly or indirectly from patentable independent claim 10, and incorporate all of its respective limitations, and therefore are also patentably distinguishable over the cited reference for at least this reason. Therefore, the Applicants respectfully submit that the rejection against these claims is also overcome.

**Rejection of Claims 4, 6, and 7 under 35 U.S.C. 103(a)**

The Office Action rejects claims 4, 6, and 7 under 35 U.S.C. 103(a) as being unpatentable over AAPA in view of Ballintine, and further in view of Brownmiller (U.S. Patent No. 5,768,255).

Brownmiller discloses a monitoring system for identifying points in a network (i.e., network elements) at which to monitor the performance of a service. Each monitoring point evaluates the service against a threshold and reports failures to a “higher layer” of the monitoring system.

Like the AAPA and Ballintine, however, Brownmiller also does not disclose or suggest sending Applicants’ service performance report message, with service-specific information, to a network element using a service management channel, for purposes of assessing a performance of the service, as set forth in the Applicants’ claimed invention. Applicants therefore respectfully traverse this rejection because the cited references, whether taken alone or in combination, do not disclose, teach, or suggest every element and limitation of the Applicants’ invention as now claimed.

Moreover, dependent claims 4, 6, and 7 depend directly or indirectly from patentable independent claim 1, and incorporate all of its respective limitations, and therefore are also patentably distinguishable over the cited

references for at least this reason. Therefore, the Applicants respectfully submit that the rejection against these claims is also overcome.

**Rejection of Claim 9 under 35 U.S.C. 103(a)**

The Office Action rejects claim 9 under 35 U.S.C. 103(a) as being unpatentable over AAPA in view of Ballintine, and further in view of Cotter (U.S. Patent No. 6,731,648).

Cotter discloses a communications network in which a source node transmits a packet to a destination node on a looped signal path. Cotter, however, also does not disclose or suggest the Applicants' service performance report messages – which contain service-specific information – for assessing the performance of the service, as set forth in the Applicants' claimed invention. Applicants therefore respectfully traverse this rejection because the cited references, whether taken alone or in combination, do not disclose, teach, or suggest every element and limitation of the Applicants' invention as now claimed.

Moreover, dependent claim 9 depends indirectly from patentable independent claim 1, and incorporates all of its respective limitations, and therefore is also patentably distinguishable over the cited references for at least this reason. Therefore, the Applicants respectfully submit that the rejection against this claim is also overcome.



**Rejection of Claim 12 under 35 U.S.C. 103(a)**

The Office Action rejects claim 12 under 35 U.S.C. 103(a) as being unpatentable over AAPA in view of Ballintine, and further in view of Galway (U.S. Patent No. 5, 768, 530).

Galway discloses a system and method for establishing communications between user devices connected to a digital communications network. Galway, however, also does not disclose or suggest the Applicants' service performance report messages – which contain service-specific information – for assessing the performance of the service, as set forth in the Applicants' claimed invention. Applicants therefore respectfully traverse this rejection because the cited references, whether taken alone or in combination, do not disclose, teach, or suggest every element and limitation of the Applicants' invention as now claimed.

Moreover, dependent claim 12 depends indirectly from patentable independent claim 10, and incorporates all of its respective limitations, and therefore is also patentably distinguishable over the cited references for at least this reason. Therefore, the Applicants respectfully submit that the rejection against this claim is also overcome.

**CONCLUSION**

In view of the amendments and arguments made herein, Applicants submit that the application is in condition for allowance and requests early favorable action by the Examiner.

If the Examiner believes that a telephone conversation with the Applicant's representative would expedite allowance of this application, the Examiner is cordially invited to call the undersigned at (508) 303-2003.


Applicants hereby petition for a one-month extension of time to extend the period for response up to and including June 23, 2005. Accompanying this paper is a check for the one-month extension fee of \$120.00.

Authorization is hereby granted to apply any credits or fees due in this case that are not covered by the enclosed check to Deposit Account 50-2295.

Respectfully submitted,

Date: 5/31/05  
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Amendments to the Drawings:

Three replacement sheets for FIGs. 1, 3, and 16 accompany this amendment document.

The replacement sheet for FIG. 1 corrects the appearance of reference numerals 24 and 36. In the originally filed FIG. 1, the reference numerals 24 and 36 spanned two lines.

The replacement sheet for FIG. 3 corrects the appearance of the word "DEMARICATION". In the originally filed FIG. 3, the word spans two lines.

The replacement sheet for FIG. 16 corrects a misspelling of the word "provisioned" in block labeled 402. In the originally filed FIG. 16, the word is misspelled "provsioned".